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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/053,650 | 04/02/1998 | KWANG CHEOL JOO | 03586.0013 | 1592 |

22852 7590 02/12/2003

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EXAMINER

BROWN, RUEBEN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2611

DATE MAILED: 02/12/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/053,650

Applicant(s)

JOO ET AL.

Examiner

Brown M. Reuben

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 27-29 and 31-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 27-29 and 31-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/20/2002 has been entered.

Response to Arguments

2. Applicant's arguments filed 11/20/2002 have been fully considered but they are not persuasive. Applicant argues on page 5, that "Metz discloses a resident application, which downloads non-resident applications but is not replaced by them". Examiner respectfully disagrees. Applicant is directed to column 36, lines 39-53 of Metz, which teaches that if the version number of the downloaded operating system does not match, i.e., meaning that it is a newer version, then the DET proceeds to extract the operating system data and upgrade the current operating system.

Art Unit: 2611

Metz, more specifically discusses the upgrade procedure in column 38, lines 6-60, by disclosing that if the system determines that the downloaded operating system was transmitted without any errors, then the running of the current operating system is terminated. Next, the downloaded operating system is copied sector by sector from volatile RAM 122 into flash memory RAM 121, the microprocessor 110 initiates a reboot of the system, and thereafter the microprocessor 110 begins running the new operating system.

Thus it is clear that Metz teaches that the current resident application is replaced by the downloaded application, as recited in the claims. Therefore examiner maintains the current rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 27-29 & 31-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Metz, (U.S. Pat # 5,666,293).

Considering claim 27, the amended claimed first domain for storing a version number of the control program is met by the discussion of Metz, storing the version number of the current operating system in STB memory, (col. 5, lines 41-45; col. 9, lines 58-60 & col. 36, lines 29-34). The claimed second domain for storing a downloaded program is broad enough to read on the storage of either a downloaded application program or operating system, col. 4, lines 11-19; col. 5, lines 60-65 & col. 6, lines 55-58.

The claimed second domain for storing a predetermined version number of a downloaded program indicating a version of the downloaded program reads on the operation of Metz, since in order to check the version number of an incoming operating system, against the version number of a currently running operating system, the system inherently at least momentarily stores the version number of the instant incoming operating system, see col. 9, lines 55-60 & Fig. 9, step 54.

As for the claimed third domain for storing the control program, Metz discloses that when the version number of the incoming operating system does not match the version number of the current operating system, that the incoming operating system is extracted from the received transport stream and stored in RAM, col. 10, lines 1-9 & col. 17, lines 45-56. Hence in Metz, the downloaded operating system is only extracted and stored in RAM if it is an upgraded version of the current operating system. Once the system confirms that there are no errors in the downloaded operating system, the instant upgraded operating system is transferred to non-

Art Unit: 2611

volatile memory. The above passage reads on the claimed third domain for storing the control program.

The additionally claimed feature of the microcontroller replacing the control program in the storage element on the basis of the control information signal, the version number of the control program and the predetermined version is the very essence of Metz, and is therefore anticipated, (Abstract; col. 5, lines 47-50 col. 9, lines 65-67 & col. 17, lines 39-50). Moreover as discussed above, Metz unambiguously discloses that upgrading algorithm includes the microprocessor 110 terminating the current operating system, copying the extracted operating system from RAM 122 into flash memory 121, rebooting the system and then running the new operating system; see col. 38, lines 6-60.

Considering claims 28, 34, 39, 45 & 49, wherein the broadcast signal includes a PID in order to identify the type of information of the broadcast signal, Metz teaches such a feature, col. 14, lines 18-35 & col. 36, lines 54-56.

Considering claims 29, 35, 40, & 50, the DET 102 of Metz includes RAM 122, for temporarily storing downloaded software, col. 10, lines 1-15.

Considering claims 31, 36, 41, 44 & 51, Metz also utilizes flash memory, col. 8, lines 9-12 & 17, lines 44-46.

Art Unit: 2611

Considering claim 32, the claimed processor for separating the control information signal from the broadcast signal reads on the disclosure of Metz, which teaches extracting the downloaded program from the transmission stream, col. 10, lines 1-5.

Considering claim 33, the claimed elements of a downloading apparatus, which corresponds with subject matter mentioned above in the rejection of claim 27, are likewise analyzed. The claimed first storage element, which temporarily stores control information representing a new control program, reads on Metz, col. 10, lines 1-15; col. 17, lines 50-55 & col. 38, lines 10-19. The above passages teach that the recently downloaded operating system is initially stored in RAM, when the downloading and error checking is complete, the operating system is transferred to a non-volatile memory, which reads on the claimed second memory element which stores the control program. The claimed controller that replaces the control program in the second storage element with the new control program also reads on Metz, col. 10, lines 1-15 & col. 38, lines 14-50.

Considering claim 37, the claimed third storage element reads on ROM, disclosed in Metz.

Considering claim 38, the claimed method for downloading a control program from a broadcast signal comprising storing a control program in a first domain of memory, reads on Metz, col. 38, lines 21-26, which teaches that the upgraded operating system may be stored in ROM 115, also see col. 37, lines 65-67 thru col. 38, line 1. The claimed method of storing a

Art Unit: 2611

predetermined value corresponding to the stored control program in a second domain reads on col. 36, lines 58-65.

The claimed method of selecting a name of a control program to be downloaded and separating the control program corresponding with the selected program name, reads on identifying the PID of the file, taught in Metz, col. 36, lines 54-60.

The claimed method of replacing the stored control program with the separated control program is met by Metz, col. 38, lines 14-28. The claimed method of replacing the stored predetermined value with a version number corresponding to the replaced control program is inherent in Metz, col. 5, lines 40-51; col. 9, lines 55-65.

Considering claim 42, the claimed method for downloading a control program from a broadcast signal, including steps that correspond with subject matter mentioned above in the rejection of claim 27 are likewise analyzed. In Metz, the system extracts a downloaded particular upgraded operating system only if its version is a certain value, otherwise the system continues to use the previously stored operating system, col. 5, lines 38-50; col. 9, lines 50-67 thru col. 10, lines 1-15 & col. 36, lines 28-55.

Considering claim 43, the claimed method steps correspond with subject matter mentioned above in the rejection of claim 38, and are likewise analyzed.

Art Unit: 2611

Considering claim 46, Metz discloses storage space for storing a version number of the control program, col. 5, lines 40-45 & col. 9, lines 55-60. Metz also discloses storing and utilizing a downloading program, col. 9, lines 20-54. Moreover Metz teaches that the downloaded control program is stored in the memory of the DET 102, col. 8, lines 12-14 & col. 10, lines 1-5.

Considering claim 47, the claimed method steps correspond with subject matter mentioned above in the rejection of claim 38, and are likewise analyzed.

Considering claims 48 & 52, the claimed process of recognizing an abnormal situation and processing the control program in the memory, reads on the operation of Metz, col. 38, lines 40-52. Metz discloses that in the event of a failure to correctly write the operating system in the RAM 122, the system attempts to reload the operating system into flash memory 121.

Art Unit: 2611

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
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or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 872-9314 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")


*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).*

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Brown M. Reuben whose telephone number is (703) 305-2399.
The examiner can normally be reached on M-F (8:30-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Andrew I. Faile can be reached on (703) 305-4380. The fax phone numbers for the
organization where this application or proceeding is assigned is (703) 872-9314 for regular
communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-4700.

Reuben M. Brown


CHRIS GRANT
PRIMARY EXAMINER